

Asian Resonance

An Ethnobotanical Use of Plants For The Treatment of Leucoderma in Mahoba District of Bundelkhand Region

Paper Submission: 10/07/2021, Date of Acceptance: 23/07/2021, Date of Publication: 24/07/2021

Abstract

Leucoderma also known as vitiligo is a skin disorder which is an acquired cutaneous disorder of pigmentation, with an incidence of 1% to 2% worldwide. There are many hypotheses for the pathogenesis of leucoderma. Recent finding provide strong evidence supporting an autoimmune pathogenesis of leucoderma. Leucoderma have major effect on quality of life. Topical therapy is employed as first-line treatment in localized leucoderma. Plants have been the basis of many traditional medicines throughout the world for thousands of years and continue to provide new remedies to mankind. The recent resurgence of plant remedies resulted from several factors, such as effectiveness of plant medicines and lesser side effects compared with modern medicines. In this paper we wish to present a detailed investigation on various herbs that can be used for the treatment of leucoderma.

Keywords: Leucoderma, melanin, herbs, Ethnomedicine, tribals.

Vinay kumar Prajapat

Assistant Professor,
Dept. of Botany,
M.B.P.Govt.P.G.College
Ashiyana, Lucknow,
U.P., India

Introduction

Leucoderma is the most common chronic depigmentation disorder or hypopigmentation disorder affecting 1-2% of the world population. It includes the loss of functioning melanocytes which causes the appearance of white patches on the skin. These white patches tend to become progressive with time. Any location on the body can be affected and the people with leucoderma have white patches in many areas of the body. The disorder affects all the races and both the sexes equally; however, it is more noticeable in people with dark skin. Although leucoderma is usually not harmful medically and causes no physical pain, its emotional and psychological effects can be devastating.

M.P.V. VikramSingh

Associate Professor,
Dept. of Botany,
Shri Jai Narain Mishra
P.G. College,
Lucknow, U.P., India

The study area district Mahoba is the oldest and historically the most important area of Bundelkhand Region. District Mahobalies in Lat. 25° 18' N and long 79° 53'E. The total area of the district is about 3071 sq. km. It is bounded by the district Hamirpur on the north; Banda on the east, the state Madhya Pradesh on the south and district Jhansi on the west. Tribes Saharia, Gonds and Kol are found in some areas of Bundelkhand region. Besides these tribes, the district is also visited periodically by Kanjad, Kuchbandhiya, Kanfara, Parkola and Jasaundhi nomads. They have a very good mosaic culture of many adjoining districts. Traditional uses of medicinal plants have been continuing since Vedic period and still a large population of villages are dependent on these plants.

Review of Literature

A number of ethnobotanical studies have been carried out by Dixit, R.S. & Pandey, H.C., (1984), Maheshwari, J.K., Singh, KK & Singh, S. (1986), Maheshwari, J.K. & Singh, J.P. (1987), Maheshwari, J.K. & Singh, Harish (1988), Saxena, S.K. & Tripathi (1989), Srivastava, P.K., Khanna, K.K., & Mudgal, V. (1992), Khanna, K.K., Shukla, G., & Mudgal, V. (1996), Kaur Navneet, Kaur Sukhbir, Sharma AK (2012), Nigam, G., Babu, G.D., & Maurya, S.K. (2013), Sudha G, Hareesha E & Reddy KSN, (2016), Rodrigues, M., Ezzedine, K., Hamzavi, I., Pandya, A. G., Harris, J. E. (2017), J Celin Pappa Rani and S Jeeva, (2018), Mihaila B, Dinica RM, Tatu A, et al. (2019) The present paper describes some ethnomedicinal plants uses in Leucoderma disorder through survey in Bundelkhand area district Mahoba and adjoining regions with exact method of drug preparation, dose and modes of application.

E: ISSN No. 2349-9443

Asian Resonance

Materials and Methods

At the course of ethnomedicinal exploration of the district, usual field & herbarium methods have been followed for collection of ethnomedicinal information and voucher plant specimens. All the plants, on which the informations are based, have been deposited in Duthie Herbarium, Botany Department, Allahabad University Allahabad. Gathered Informations were compared with various published literature to find out new ones. Out of lots, six informations found to be new which are given below in following sequences, Botanical name, Family name, Local name, Locality, Collection number, users, Plants characters and recorded traditional uses.

Observation and Result

The following plants preparations were found to new and unreported for leucoderma as for as our study goes

Abrus precatorius L.



Family

Fabaceae (Papilionaceae)

Local name

Gumchi, Ghunchu, Gunja

Locality

Dharaun, Mahoba, Naraini

Collection number

115

Users

Gond, Kol and Villagers

Plant characters

A more or less woody climber, leaves abruptly pinnate, leaflets oblong, rounded at both ends. Racemes axillary, pedunculate. Flowers pale-violet, turning red. Seeds subglobose, shining scarlet with a black hilum.

Ethno-medicinal uses

The paste of seeds, of (*A. precatorius* and roots of *Plumbago zeylanica* (chitrakala) is applied in skin disease such as leucoderma (white leprosy).

Mimosa pudica.



Family

Mimosaceae

Local name

Chhui-mui

Locality

Mahoba Naraini

Collection number

78

Users

Gond, Vaidya and Villagers

Plant characters

A spreading diffuse herb, stem and branches prickly and bristly. Leaves very sensitive to touch. Pink-purple axillary heads of flowers in peduncled heads, paired. Pod flat, membranous 3-5 jointed, margins distinctly bristly.

Ethno-medicinal uses

Stem bark, mixed with seed oil of *Pongamia pinnata* is applied in the leucoderma.

Ficus religiosa L.



Family

Moraceae

Local name

Peepal

Locality

Ubiquitous

Collection number

28

Users

villagers kol and saharia

Plant characters

A large or medium-sized tree with spreading branches. Fruits sessile in axillary pairs. Greyish branches and long petioled, drooping, caudate, acuminate leaves. Perianth broad ovate male and female flowers broadly ovate, sometime absent in gall flowers.

Ethno-medicinal uses

Dried bark powder, (10gms) put it in one glass water at night and drink the water regularly in the morning for 7 days, empty stomach in case of leucoderma.

Ocimum sanctum L.



Family

Lamiaceae

Local name

Tulsi

E: ISSN No. 2349-9443

Asian Resonance

Locality

Planted

Collection number

30

Users

villagers gond and vaidya

Plant characters

Erect, herb up to 60 cm. tall, with scented ovate or elliptic, hairy and purplish flower in verticillasters. Fruit of long *nutlets*, ellipsoid.

Ethno-medicinal uses

Leaf paste with honey, applied for treatment of leucoderma.

Terminalia bellirica(Gaertn.) Roxby



Family

Combretaceae

Local name

Bahera

Locality

Mahoba Kharela

Collection number

193

Users

Gond and Vaidya

Plant characters

A large tree up to 20-25 m high. Leaves broadly elliptic, long petioled. Flowers dirty grey or greenish yellow spikes, with a strong offensive smell. Fruit ovoid to obovoid, grey, velvety, faintly 5-ridged when dry.

Ethno-medicinal uses

Bark paste, used externally to cure leucoderma.

Woodfordia fruticosa (Linn.)kurz



Family

Lythraceae

Local name

Dhai Phool

Locality

Dharun and Mahoba

Collection number

359

Users

Gond and Villagers

Plant characters

A much branched rigid shrub. Leaves subsessile, lanceolate, entire and acuminate. Flowers in short peduncle axillary cymes. Capsule enclosed in persistent calyx. Seeds many, smooth.

Ethno-medicinal uses

Root bark, decoction with the paste of long peppers (3: 2) applied to cure leucoderma

Discussion & Conclusion

Current world-wide interest in traditional medicine has led to rapid development and studies of many remedies employed by various ethnic groups of the world. There are a number of medicinal plants which are used traditionally by the tribal people and periodically visitor Kanjad, Kuchbandhiya, Kanfara, Parkola and Jasaundhi of Mahoba district in skin disorder. In the present study we identified number of medicinal plants used by the people to cure dermatological disorder as Leucoderma. The list of plants enumerated in this paper is not exhaustive as it is anticipated that many more such plants will be added after thorough botanical exploration and more detailed ethnobotanical studies. The author came to know during discussion with tribals, periodically visitors and vaidyas dealing with herbal medicines, that some of the very useful plants which were quite common in this area.

Acknowledgement

The author is grateful to the tribal, rural, nomadic people and vaidyas who have cooperated in the collection of informations and materials presented.

References

1. Dixit, R.S. Pandey, H.C., (1984). Plants used as folk medicine in Jhansi and Lalitpur sections of Bundelkhand, Uttar Pradesh. *Int. J. crude Drug Res.* 22 No.1 pp 47-51
2. Maheshwari, J.K., Singh, KK & Singh, S. (1986). *Ethnobotany of the Tharus of kheri district. Uttar Pradesh NBRI Lucknow P48.*
3. Maheshwari, J.K. & Singh, J.P. (1987). *Traditional phytotherapy amongst the kol tribes of Banda district, Uttar Pradesh J. Econ. Tax. Bot* 9 pp 165-171.
4. Maheshwari, J.K. & Singh, Harish (1988). *Ethnobotanical observations on the Saharia Tribe of Lalitpur district U.P. Vanyajati Jul* pp 23-33.
5. Saxena, S.K. & Tripathi (1989). *Ethnobotany of Bundelkhand I studies on the Medicinal uses of wild trees by the tribal in habitants of Bundelkhand regions. J. Econ. Tax. Bot.* 13 (2): pp 381-389.
6. Srivastava, P.K., Khanna, K.K., Mudgal, V. (1992). *New traditional herbal remedies from the rural folklore of Hamirpur district, Uttar Pradesh. J. Econ. Tax Bot Addl. Ser* 10: pp 399-406.

7. Khanna, K.K., Shukla, G., & Mudgal, V. (1996). *New Traditional medicinal uses of plants from Jalaun district Uttar Pradesh*, *J.Econ. Tax. Bot. Addl. ser.* 122:pp 108-111.
8. KaurNavneet, KaurSukhbir, Sharma AK(2012)A *Review on leucoderma and reported herbs for its treatment*,*Journal of Drug Delivery & Therapeutics*; 2(3): pp53-59
9. Nigam,G.,Babu,G.D. ,& Maurya, S.K.(2013).*Folklore Claims on some medicinal plants used in Jhansi district, Uttar Pradesh, India, by Rawat and Sahariya Tribes*.*Research and Reviews:Journal of Pharmacology and phytochemistry*, 1 (2): pp1-4.
10. Sudha G, Hareesha E & Reddy KSN, (2016).*Ethnomedicinal plants used for skin ailments by Yanadi tribe in Chittoor district, Andhra Pradesh*, *Unique J Ayurvedic Herbal med*, 4(1): pp 31-33
11. Rodrigues, M., Ezzedine, K., Hamzavi, I., Pandya, A. G., Harris, J. E. (2017).*Current and emerging treatments for vitiligo*.*Journal of the American Academy of Dermatology*, 77(1), pp17-29.
12. J Clin Papa Rani and S Jeeva, (2018)*Medicinal plants used for the treatment of dermatological ailments by the Kani tribe of Kanyakumari Wildlife Sanctuary, Tamilnadu, India*.*Bioscience Discovery*, 9(3): pp 438-447.
13. Mihaila B, Dinica RM, TatuA, et al.(2019) *New insights in vitiligo treatments using bioactive compounds from Piper nigrum*. *ExpTher Med.*;17(2): pp 1039–1044.